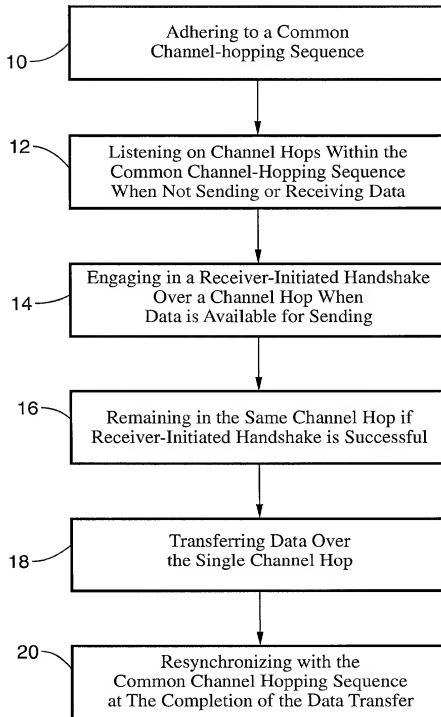


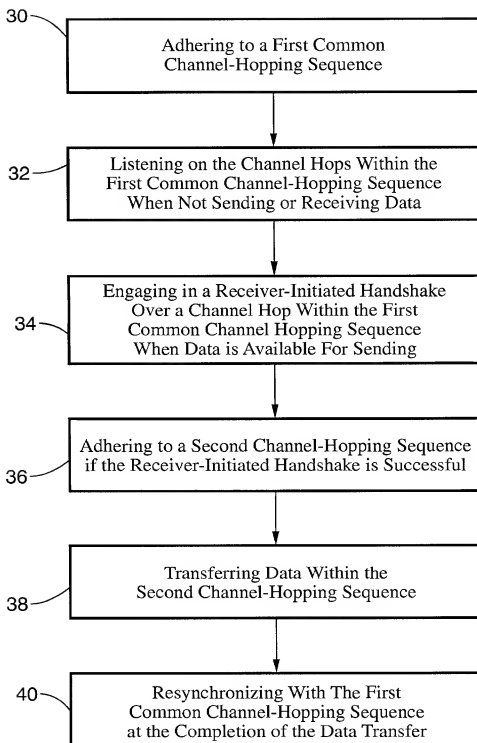
| time<br>hop | t1   | t2   | t3   | t4      | t5      | t6 | t7   | t8 | t9   | t10 | t11  | t12 | t13 |
|-------------|------|------|------|---------|---------|----|------|----|------|-----|------|-----|-----|
| h1          | x->y |      |      |         | y->x    |    |      |    | x->y |     |      |     |     |
|             | RTR  | DATA |      |         |         |    |      |    | ACK  |     |      |     |     |
| h2          |      | z->w | w->z |         |         |    | z->w |    |      |     | w->z |     |     |
|             |      | RTR  | CTS  | DATA    |         |    |      |    |      |     | ACK  |     |     |
| h3          |      |      | a->b | silence |         |    |      |    |      |     |      |     |     |
|             |      |      | RTR  |         |         |    |      |    |      |     |      |     |     |
| h4          |      |      |      | c->d    |         |    |      |    |      |     |      |     |     |
|             |      |      |      | RTR     | backoff |    |      |    |      |     |      |     |     |
| h5          |      |      |      |         |         |    |      |    |      |     |      |     |     |

FIG. 1

**FIG. 2**

| time<br>hop | t1          | t2           | t3           | t4           | t5           | t6           | t7           | t8           | t9           | t10          | t11         | t12 | t13 |
|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|-------------|-----|-----|
| h1          | x->y<br>RTR |              |              |              |              |              |              |              | z->w<br>DATA |              |             |     |     |
| h2          |             | x->y<br>RTR  |              |              | y->x<br>DATA |              |              |              |              |              | w->z<br>ACK |     |     |
| h3          |             |              | y->x<br>DATA |              |              |              | z->w<br>DATA |              |              |              |             |     |     |
| h4          |             |              |              | c<->d<br>RTR |              | z->w<br>DATA |              | y->x<br>DATA |              |              |             |     |     |
| h5          |             | y->x<br>DATA |              |              | z->w<br>DATA |              |              |              |              |              |             |     |     |
| h6          |             |              |              | z->w<br>DATA |              | y->x<br>DATA |              |              |              |              |             |     |     |
| h7          |             |              | a->b<br>RTR  |              |              |              | y->x<br>DATA | z->w<br>DATA |              |              |             |     |     |
| h8          |             |              | w->z<br>CTS  | y->x<br>DATA |              |              |              |              |              |              |             |     |     |
| h9          |             |              |              |              |              |              |              |              | x->y<br>ACK  | z->w<br>DATA |             |     |     |

FIG. 3

**FIG. 4**

| hop | time |      |      |                  |         |    |      |    |      |      |      |     |      |     |     |     |      |
|-----|------|------|------|------------------|---------|----|------|----|------|------|------|-----|------|-----|-----|-----|------|
|     | t1   | t2   | t3   | t4               | t5      | t6 | t7   | t8 | t9   | t10  | t11  | t12 | t13  | t14 | t15 | t16 | t17  |
| h1  | x->y |      |      |                  | y->x    |    |      |    | x->y |      |      |     | x->y |     |     |     | y->x |
|     | RTR  | DATA |      |                  |         |    |      |    | ACK  | DATA |      |     |      |     |     |     | ACK  |
| h2  |      | z->w | w->z |                  |         |    | z->w |    |      |      | w->z |     |      |     |     |     |      |
|     |      | RTR  | CTS  | DATA             |         |    |      |    |      |      | ACK  |     |      |     |     |     |      |
| h3  |      |      | a->b |                  |         |    |      |    |      |      |      |     |      |     |     |     |      |
|     |      |      | RTR  | silence          |         |    |      |    |      |      |      |     |      |     |     |     |      |
| h4  |      |      |      | $\alpha < \beta$ |         |    |      |    |      |      |      |     |      |     |     |     |      |
|     |      |      |      | RTR              | backoff |    |      |    |      |      |      |     |      |     |     |     |      |
| h5  |      |      |      |                  |         |    |      |    |      |      |      |     |      |     |     |     |      |

FIG. 5

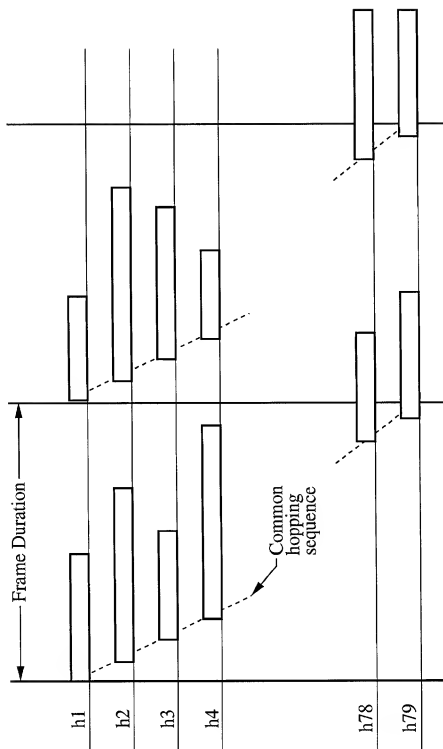


FIG. 6

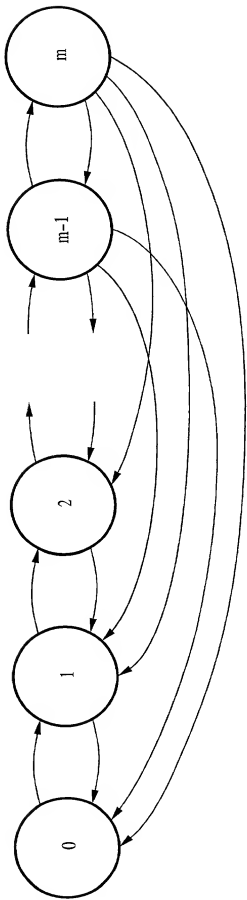


FIG. 7

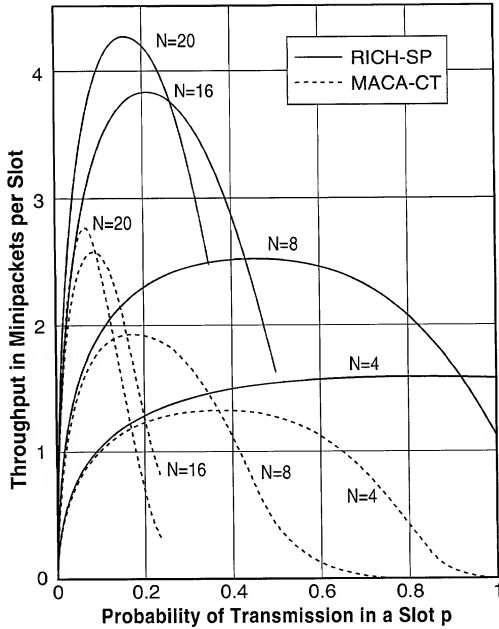


FIG. 8



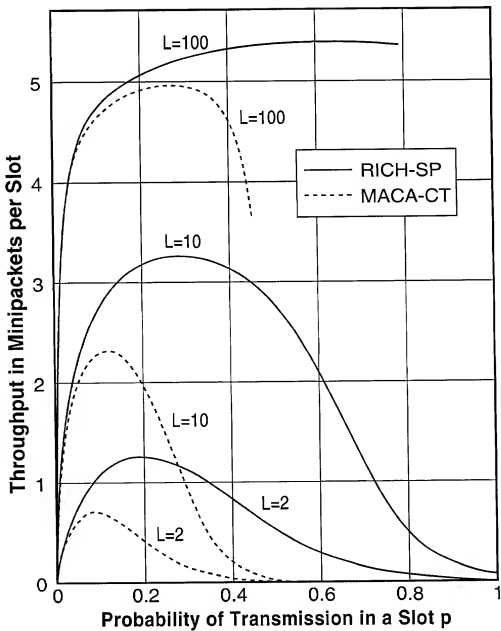


FIG. 9

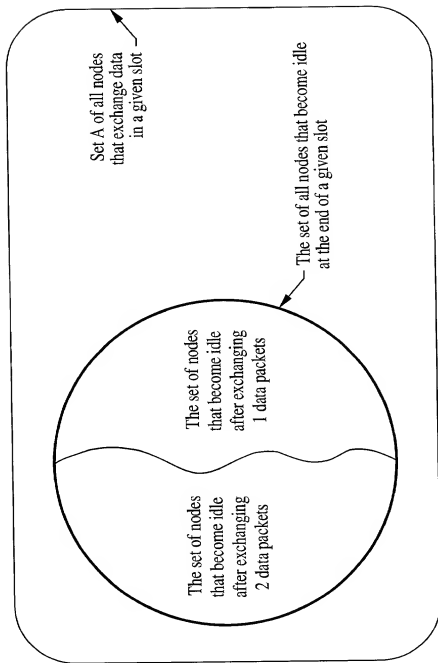


FIG. 10

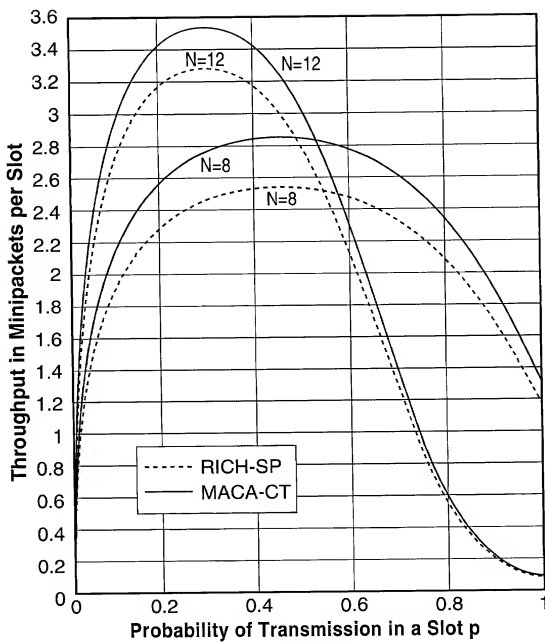


FIG. 11

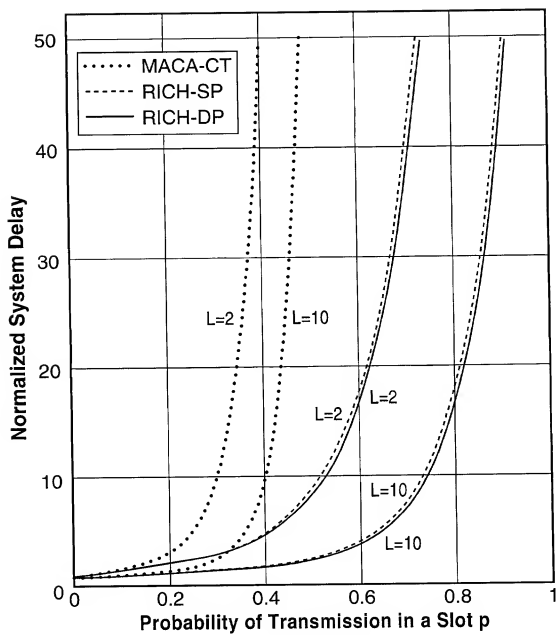


FIG. 12

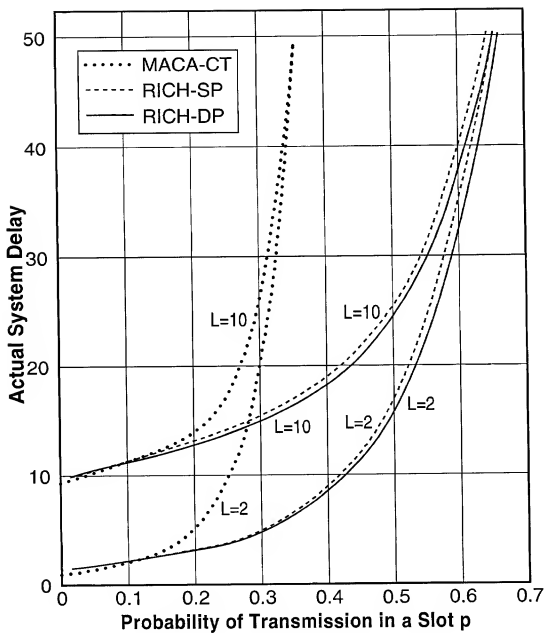
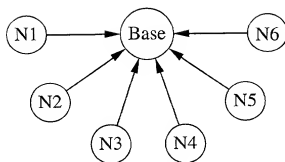
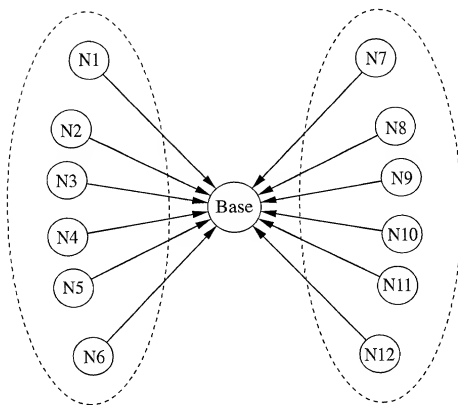
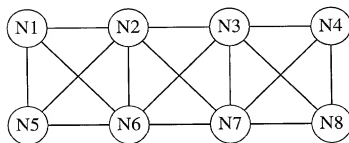


FIG. 13

**FIG. 14****FIG. 15****FIG. 16**

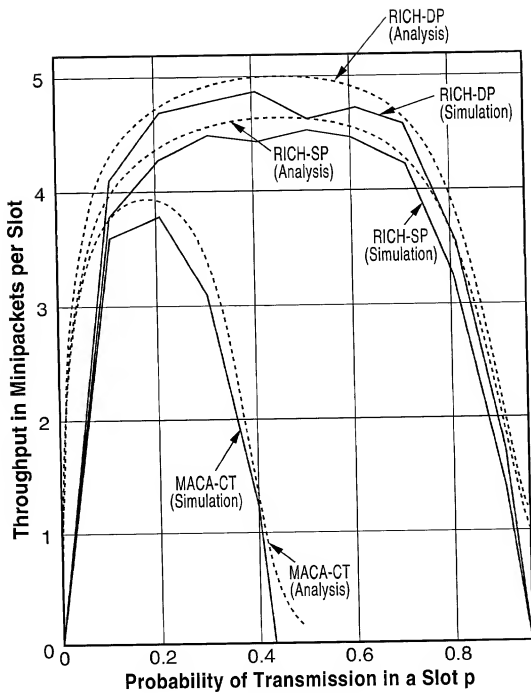


FIG. 17

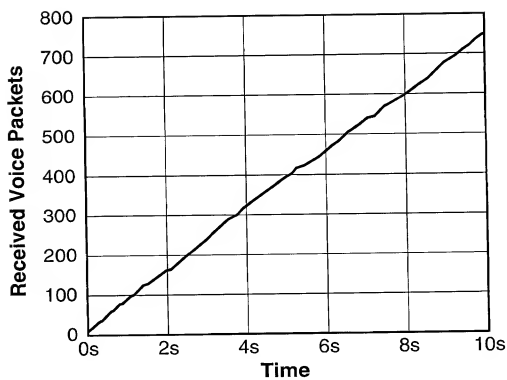


FIG. 18

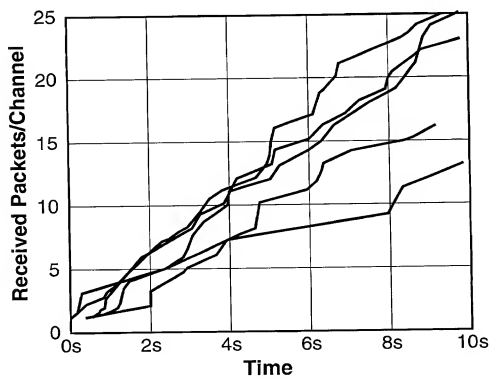


FIG. 19



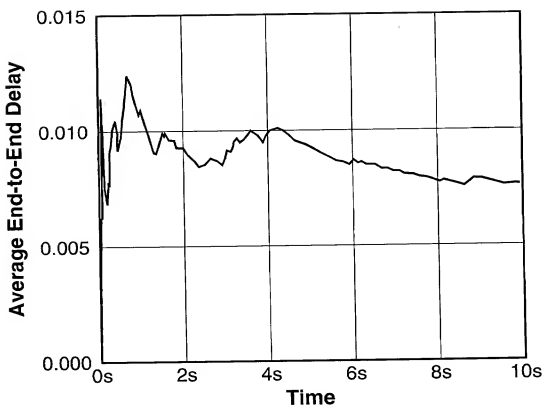


FIG. 20

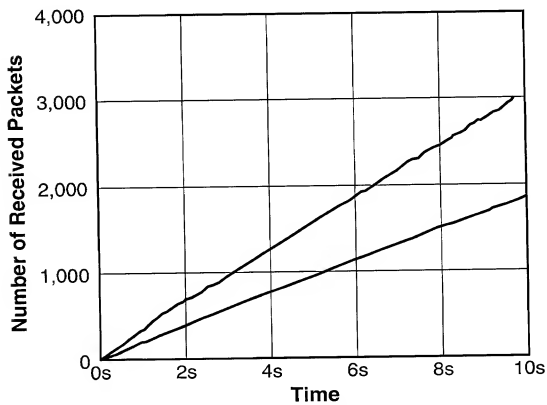


FIG. 21

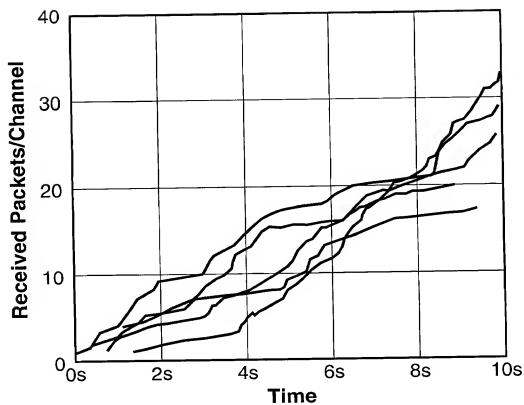


FIG. 22

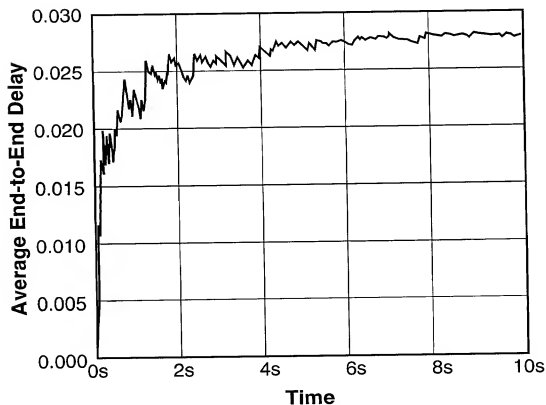


FIG. 23

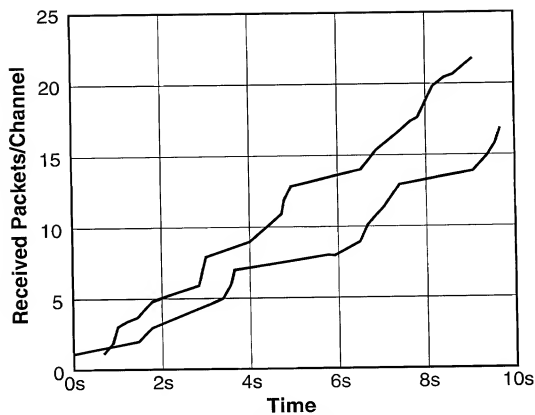


FIG. 24

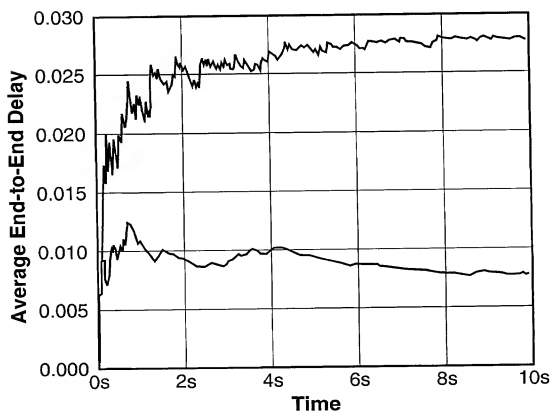


FIG. 25

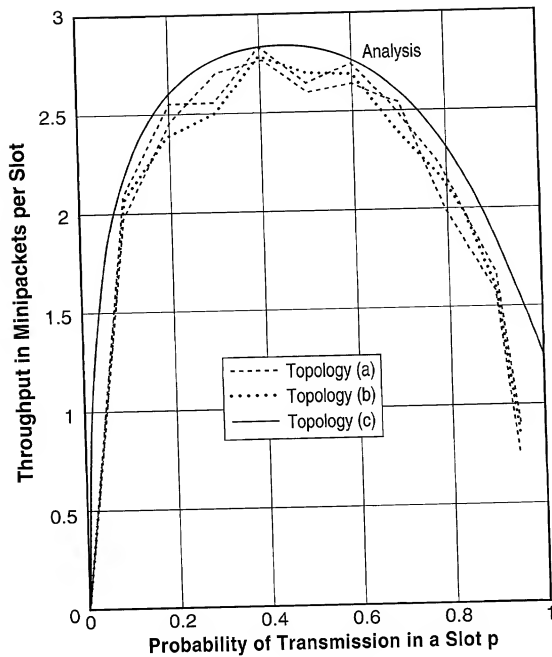


FIG. 26